

Message Text

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ORIGIN ACDA-12

INFO OCT-01 EUR-12 EA-12 ISO-00 DOE-15 OES-07 NRC-07
SOE-02 CIAE-00 INR-10 IO-14 L-03 NSAE-00 NSC-05
EB-08 DODE-00 SS-15 SP-02 CEQ-01 PM-05 /131 R

DRAFTED BY ACDA:GBRAY/DOE:JLEARY:SK

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-----007986 141327Z /47

R 132145Z APR 78

FM SECSTATE WASHDC

TO AMEMBASSY LONDON

AMEMBASSY TOKYO

INFO AMEMBASSY CANBERRA

AMEMBASSY OTTAWA

UNCLAS STATE 095432

E.O. 11652: N/A

TAGS: ENRG, TECH, INFCE, UK, JA

SUBJECT: COMMENT ON INFCE DOCUMENT "REGIONAL DIFFERENCES
IN ENERGY SUPPLIES UTILIZING URANIUM RESOURCES IN VARIOUS
FUEL CYCLES"

1. ACTION ADDRESSEES PLEASE PROVIDE TEXT OF PARA 2 TO
APPROPRIATE HOST OFFICIALS (COLLIER (UK) AND UEMATSU (JA-
PAN)).
2. AS REQUESTED BY THE UK/JAPAN TECHNICAL SECRETARIAT OF
INFCE WG 4A, THE FOLLOWING ARE PRELIMINARY COMMENTS OF THE
US DELEGATION ON THE SUBJECT PAPER IMFCE/WG 4/17 (A,B)
DATED MARCH 16, 1978 BY THE TECHNICAL SECRETARIAT.
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THE PRINCIPAL CONCERNS OF THE US DELEGATION REGARDING THE
SUBJECT DOCUMENT ARE (1) THAT ALTHOUGH IT CONTAINS NO IN-
PUT FROM WORKING GROUPS 1, 3 AND 6, IT DOES CONTAIN EX-
TENSIVE ASSUMPTIONS AS TO THE RESULTS OF THOSE WORKING
GROUPS EVALUATIONS, AND (2) THAT THE PAPER ADDRESSES
THE SITUATION OF ONLY A RESTRICTED NUMBER OF THE COUNTRIES

PARTICIPATING IN INFCE.

THE SUBJECT PAPER WAS PREPARED UNDER TASK 4 OF THE WORKING PAPER DOCUMENT INFCE/WG4/6(A). AS STATED IN THIS DOCUMENT,

"IN THE OPINION OF THE CO-CHAIRMEN, IT IS NOT POSSIBLE TO COME TO A FINAL VIEW ON THIS SUBJECT UNTIL WG 1 HAS COME TO THE END OF ITS TASK, BECAUSE ANY ASSESSMENT MUST DEPEND ON THE SUPPLY OF URANIUM THROUGHOUT THE WORLD AND REGIONALLY, AND THIS INVOLVES BOTH THE RATE AT WHICH IT CAN BE OBTAINED AND EXPORT POLICIES FROM ONE COUNTRY TO ANOTHER." IT IS FURTHER STATED THAT IN THE MEANTIME FACTUAL INFORMATION COULD BE COLLECTED TO ASSESS THE UTILIZATION OF URANIUM IN VARIOUS THERMAL REACTOR CYCLES SUCH AS ONCE THROUGH, URANIUM RECYCLE, URANIUM/PLUTONIUM RECYCLE, AS WELL AS PLUTONIUM RECYCLE IN FAST REACTORS. THE US DELEGATION SUPPORTED BOTH OF THESE STATEMENTS IN DRAFTING THE WORKING PAPER.

THE SUBJECT DOCUMENT DOES NOT MEET THE OBJECTIVES OF TASK 4 STATED ABOVE. FIRST IT GOES BEYOND A COLLECTION OF FACTUAL INFORMATION ON AN INTERIM BASIS. FOR EXAMPLE, ON PAGE 1 OF INFCE/WG4/17(A,B) IT IS STATED THAT "THE DATA SHOW CLEARLY THAT NORTH AMERICA, AUSTRALIA, AND SOUTH AFRICA HAVE MUCH LESS NEED FOR REPROCESSING OF THERMAL REACTOR FUEL TO RECOVER URANIUM AND PLUTONIUM FOR USE

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EITHER IN THERMAL OR FAST REACTORS THAN HAVE WESTERN EUROPE OR JAPAN." SUCH A CONCLUSIONARY STATEMENT GOES BEYOND THE OBJECTIVE OF PROVIDING FACTUAL INFORMATION. MOREOVER, THE WORKING PAPER IS BASED ON URANIUM SUPPLY AND PRODUCTION CAPACITY, AND ELECTRICAL DEMAND PROJECTIONS FROM THE OECD/NEA REPORT "URANIUM RESOURCES, PRODUCTION, AND DEMAND," DECEMBER 1977, AS WELL AS ON A PARTICULAR AECL DOCUMENT. CLEARLY CONCLUSIONS REGARDING THE "NEED FOR REPROCESSING" CANNOT BE BASED EXCLUSIVELY ON THESE CONSIDERATIONS. IN ADDITION TO THE BROADER INPUT OF SUPPLY AND PRODUCTION CAPACITY TO BE OBTAINED FROM WG1, THE FINDINGS OF WG3 REGARDING FUEL ASSURANCES AND OF WG6 ON FUEL ARISING AND ALTERNATIVES FOR DISPOSITION OF SPENT FUEL SHOULD BE FACTORED INTO ANY SUCH ASSESSMENT.

DOCUMENT INFCE/WG4/17(A,B) ALSO CONTAINS FACTUAL INFORMATION THAT APPEARS INCONSISTENT WITH OTHER DOCUMENTS SUPPLIED TO WG4 BY THE TECHNICAL SECRETARIAT. SPECIFICALLY IN SECTION 5, PAGE 2, IT IS STATED THAT "RECYCLING OF URANIUM IS ASSUMED TO TAKE PLACE FROM 1980, AND TO REDUCE ANNUAL NATURAL URANIUM REQUIREMENTS BY 15 PERCENT GRADUALLY OVER A PERIOD OF FIVE YEARS. RECYCLING OF PLU-

TONIUM IS ASSUMED TO ACHIEVE SIMILAR SAVINGS FROM 1990. TAILS ASSAY IS VERY INFLUENTIAL ON URANIUM DEMAND AND HAS BEEN TAKEN AT THE LOWEST LIKELY ECONOMIC LIMIT OF 0.2 PERCENT."

THESE STATEMENTS DO NOT APPEAR TO BE SUPPORTED. FOR

EXAMPLE, YOUR DOCUMENT INFCE/WG4/19A, THE SECRETARIAT'S COMPILATION OF NATIONAL PLANS FOR REPROCESSING FROM QUESTIONNAIRE RESPONSES, CLEARLY DEMONSTRATES THAT NONE OF THE PARTICIPATING COUNTRIES WILL BE IN A POSITION TO BEGIN RECYCLING URANIUM ON ANY SIGNIFICANT SCALE BEFORE ABOUT 1990. MOREOVER, IF THE PROJECTED REPROCESSING CAPABILITY IN 1990 OF ABOUT 2000 T/YR GIVEN IN PAPER WG4/19A
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WERE TO BE ACHIEVED, WHICH DOES NOT APPEAR LIKELY, THE POTENTIAL FOR URANIUM RECYCLE IS ONLY ABOUT TWO PERCENT OF THE AVAILABLE URANIUM PRODUCTION CAPACITY IN 1990, WHICH IS ONLY ONE-TENTH OF THE PROJECTED SAVINGS. FOR THE GROWING REACTOR ECONOMY PROJECTED, ANNUAL URANIUM SAVINGS FROM URANIUM AND PLUTONIUM RECYCLE ARE ALSO CONSIDERABLY LESS THAN 15 PERCENT OVER THE TIME PERIOD QUOTED. FURTHERMORE, THERE IS NO MENTION OF THE RELATIVE COSTS OF OBTAINING URANIUM AND PLUTONIUM FROM REPROCESSING COMPARED TO THE SAME FUEL VALUE FROM ORIGINAL SUPPLY. THE ASSUMPTION OF 0.2 PERCENT TAILS ASSAY SEEMS VERY OPTIMISTIC IN THE TIME FRAME CONSIDERED IN VIEW OF THE PROJECTED SEPARATIVE WORK CAPACITIES AND DEMANDS.

A FURTHER INCONSISTENCY BETWEEN THE USE OF PAPERS WG4/17 (A,B) AND WG4/19(A) IS THE USE OF THE UK AND FRENCH REPROCESSING CAPACITY AS POTENTIAL SOURCES OF PLUTONIUM FOR THERMAL RECYCLE. SINCE BOTH THE UK AND FRANCE HAVE STATED THEIR INTENT TO USE THIS PLUTONIUM ONLY IN FAST REACTORS, IT WILL NOT BE AVAILABLE TO REDUCE URANIUM REQUIRED FOR THERMAL REACTORS. THIS CONSIDERATION HAS A LARGE IMPACT ON POTENTIAL SAVINGS FROM RECYCLE, SINCE MORE THAN HALF OF THE AVAILABLE REPROCESSING CAPABILITY IN 1990 IS IN THESE TWO COUNTRIES. CONSEQUENTLY, THE NEAR-TERM URANIUM RESOURCE SAVINGS ACHIEVABLE BY PLUTONIUM RECYCLE CITED IN THE SUBJECT PAPER APPEAR TO BE OVERSTATED ON THESE GROUNDS ALSO.

IT SHOULD BE NOTED THAT TASK 4 DOES NOT CONSTRAIN THE SCHEDULES OF ANY OTHER TASKS IN INFCE, INCLUDING THOSE OF WG4. THUS, THERE IS ADEQUATE TIME TO UPDATE THE PAPER TO INCORPORATE THE ABOVE COMMENTS, AND TO OBTAIN INPUT FROM WG1, WG3 AND WG6 BEFORE THE WORKING GROUP TAKES UP
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DISCUSSION OF THIS PAPER. CHRISTOPHER

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Message Attributes

Automatic Decaptioning: X
Capture Date: 01 jan 1994
Channel Indicators: n/a
Current Classification: UNCLASSIFIED
Concepts: DOCUMENTS, SUPPLIES, URANIUM, TEXT, NUCLEAR FUELS
Control Number: n/a
Copy: SINGLE
Draft Date: 13 apr 1978
Decaption Date: 01 jan 1960
Decaption Note:
Disposition Action: n/a
Disposition Approved on Date:
Disposition Case Number: n/a
Disposition Comment:
Disposition Date: 01 jan 1960
Disposition Event:
Disposition History: n/a
Disposition Reason:
Disposition Remarks:
Document Number: 1978STATE095432
Document Source: CORE
Document Unique ID: 00
Drafter: GBRAY/DOE:JLEARY:SK
Enclosure: n/a
Executive Order: N/A
Errors: N/A
Expiration:
Film Number: D780160-1010
Format: TEL
From: STATE
Handling Restrictions: n/a
Image Path:
ISecure: 1
Legacy Key: link1978/newtext/t19780458/aaaabxmj.tel
Line Count: 176
Litigation Code IDs:
Litigation Codes:
Litigation History:
Locator: TEXT ON-LINE, ON MICROFILM
Message ID: 385aa1b0-c288-dd11-92da-001cc4696bcc
Office: ORIGIN ACDA
Original Classification: UNCLASSIFIED
Original Handling Restrictions: n/a
Original Previous Classification: n/a
Original Previous Handling Restrictions: n/a
Page Count: 4
Previous Channel Indicators: n/a
Previous Classification: n/a
Previous Handling Restrictions: n/a
Reference: n/a
Retention: 0
Review Action: RELEASED, APPROVED
Review Content Flags:
Review Date: 29 mar 2005
Review Event:
Review Exemptions: n/a
Review Media Identifier:
Review Release Date: N/A
Review Release Event: n/a
Review Transfer Date:
Review Withdrawn Fields: n/a
SAS ID: 2972645
Secure: OPEN
Status: NATIVE
Subject: COMMENT ON INFCE DOCUMENT ("REGIONAL DIFFERENCES IN ENERGY SUPPLIES UTILIZING URANIUM RESOURCES IN VARIOUS FUEL CYCLES")
TAGS: ENRG, TECH, US, UK, JA, INFCE
To: LONDON TOKYO
Type: TE
vdkgvwkey: odb://SAS/SAS.dbo.SAS_Docs/385aa1b0-c288-dd11-92da-001cc4696bcc
Review Markings:
Sheryl P. Walter
Declassified/Released
US Department of State
EO Systematic Review
20 Mar 2014
Markings: Sheryl P. Walter Declassified/Released US Department of State EO Systematic Review 20 Mar 2014